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NOTES ON THE TYPES OF CERTAIN EARLY DESCRIBED SPECIES OF MONOTREMES, MARSUPIALS, MURIDAE AND BATS FROM THE INDO-AUSTRALIAN REGION

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The following notes, made upon types or historic specimens of certain rodents, marsupials and bats, were secured during the summer months of 1937, when I was privileged to study portions of the collections contained in the natural history museums at Genoa, Berlin, Leiden, London, Tring and Paris. I visited those cities in the order named after spending a short time at the principal museums of Australia.

I wish here to express my deep appreciation of the cordial reception I received from the authorities of the several institutions: Dr. Oscar de Beaux at Genoa; Dr. H. Pohle and Dr. E. Stresemann of the Museum der Universität, Berlin; Drs. G. C. A. Junge, H. Boschma and L. D. Brongersma at Leiden; Messrs. M. A. C. Hinton and T. C. S. Morrison-Scott at the British Museum (Natural History), London; Dr. Karl Jordan of Tring; and M. Boudarelle (representing Drs. E. Bourdelle and Paul Rode) at 55 Rue de Buffon, Paris; and in the museums of Australia, Dr. H. Longman and Messrs. E. Le G. Troughton, C. W. Brazenor, H. H. Finlayson and L. Glauert. In every case these gentlemen gave me the fullest co-operation. Upwards of forty skulls of types or type series were extracted and cleaned for me, in consequence of which I was fortunate to be the first student ever to study the teeth of many holotypes.

I wish also to acknowledge the kindness of Mr. H. S. V. Sody of Amsterdam, not only for permitting me to study his private collection but for sending some specimens to the British Museum for further examination. To Drs. N. Gyldenstolpe of Stockholm and W. Meise of Dresden I am indebted for similar loans.

In the following memoranda I have set down certain particulars regarding some of those specimens, which I feel ought to be published without further delay. Some homonyms are noted. Special notice has been taken in cases where species depend upon co-types instead of holotypes. Certain restrictions have been suggested.

Photographs of almost all of the type skulls examined are now on file at The American Museum of Natural History.

For references in the text to Jentink's Catalogue see "Catalogue Systematique des Mammifères," Muséum d' Histoire Naturelle des Pays-bas, volumes XI, XII, 1888, 1892.

MONOTREMATA

Proechidna bruijnii Peters and Doria

TYPE.—Genoa, C.E. 1623, sex unknown, mandible and skin missing, collected by Bruijn, 1874, Arfak Mountains, Dutch New Guinea.

MARSUPIALIA

Genera dealt with: *Antechinus, Dasycercus, Myoictis, Phascolosorex, Murexia, Phascogale, Dasyurus, Cercartetus, Dromicia, Wyulda, Phalanger, Pseudochirus, Dendrolagus, Dorcopsis, Macropus, Thylogale, Potorous, Lagostrophus, Bettongia.*

Dasyuridae

Antechinus minimus (Geoffroy St. Hilaire)

TYPE.—Paris Museum, 381, 192A, adult ♂, collected by Peron and Lesueur in Tasmania, voyage of the courvette "Le Naturaliste."

The type is a mounted skin with skull extracted and cleaned (1937).

Dasycercus cristicauda (Krefft)

TYPE.—Australian Museum, Sydney, No. 669 1/2, a mounted skin. Skull ?

Myoictis bruijnii (Peters)

TYPE.—Genoa, C.E. 590, obtained through Bruijn, from Andai, Dutch New Guinea.

Skull in good condition. In 1937 the body was supposed to be in alcohol, but specimen had been allowed to dry. Now in very bad condition. Label states that Bruijn collected the animal at Andai in 1876 and presented it to Beccari at Ternate.

Myoictis pilicauda (Peters and Doria)

TYPE.—Genoa, C.E. 3922, adult ♀, collected by d'Albertis, Fly River, Papua.

The type is in alcohol.[1] Skull extracted and cleaned.

Myoictis melas (Schlegel and Müller)

TYPE.—Leiden Museum, specimen "a" of Jentink's Catalogue, collected by Müller, August, 1828, at Lobo (Triton Bay), south coast of Vogelkop peninsula, Dutch New Guinea.

The type is a mounted skin and skull (extracted and cleaned).

Myoictis melas thorbeckiana (Schlegel)

CO-TYPES.—Leiden Museum: specimen "c" of Jentink's Catalogue, collected by von Bernstein, 1866, at Salawatti (Sailolo), Dutch New Guinea; and specimen "d," juvenal ♀, without skull, collected by von Bernstein, February 22, 1865. Specimen "c" is a mounted skin with skull extracted and cleaned. Specimens "a" and "b" appear also to be co-types.

Myoictis wallacei (Gray)

TYPE.—B.M. 58.2.20.1, juvenal ♂, collected by A. R. Wallace, 1857, at Aru Island.

The type is a skin with cleaned skull.

[1] In a personal communication recently received, Dr. de Beaux states that the specimens in alcohol from New Guinea have now been prepared as skins and skulls.

Phascolosorex dorsalis (Peters and Doria)

CO-TYPES.—Genoa, C.E. 3916, adult ♂, collected by Beccari, June, 1875, at Hatam, Arfak, Dutch New Guinea. Berlin, 5664, juvenal ♂, collected at Arfak.

The Genoa specimen in alcohol, skull cleaned; the Berlin specimen a dismounted skin and cleaned skull, the latter marked with an asterisk (significance ?).

Murexia longicaudata (Müller and Schlegel)

TYPE.—Leiden Museum, specimen "a" of Jentink's Catalogue (Field No. 52), young adult ♂, collected by Rosenberg, 1865, at Wonoumbai, Aru Island.

The type is a mounted skin with skull extracted and cleaned.

Phascogale doriae Thomas

CO-TYPES.—Genoa, C.E. 589, skull, C.E. 3907, body of 589 in alcohol, young adult ♀. B.M. 87.8.17.5, juvenal ♂, skull poorly cleaned. Both collected by Beccari at Mori, Arfak Mountains, Dutch New Guinea, in May, 1875.

Phascogale melanura Thomas

CO-TYPES.—Genoa, C.E. 3915, adult ♀, in alcohol, skull clean. B.M. 0.6.26.1, adult ♂, in alcohol, skull still inside.

Both collected at Moroka, headwaters of Musgrave River, Papua, by Loria, July–August, 1893.

Dasyurus albopunctatus Schlegel

TYPE.—Leiden Museum, specimen "a" of Jentink's Catalogue, old adult ♀, collected through Frank (dealer), 1879, from "Sapoua," Arfak Mountains, Dutch New Guinea.

The type is a mounted skin with skull extracted and cleaned.

Dasyurus fuscus Milne-Edwards

TYPE.—Paris Museum, 1880 (1463), No. 371, young adult ♂, collected by Laglaize at Arfak Mountains, Dutch New Guinea.

The type is a mounted skin with skull extracted and cleaned.

Dasyurus maculatus Geoffroy St. Hilaire

TYPE.—Paris Museum, 354, No. 141, adult ♂, collected by Ce. Baudin ("Exped. de l'an 11 de la Nouvelle Hollande. . .").

The type is a mounted skin with skull still inside. Apparently equals *D. macrourus*.

Dasyurus macrourus Geoffroy St. Hilaire

TYPE.—Paris Museum, 355, No. 142, adult ♂, collected by Ce. Baudin, "an 11," in Australia, voyage of "Le Naturaliste."

The type is a mounted skin. Skull extracted but not found. The skin appears identical to the type of *maculatus*.

Phalangeridae

Cercartetus concinnus (Gould)

CO-TYPES.—B.M. 44.7.9.12, adult ♂; B.M. 44.7.9.13, ♂.

Both skins with skulls, collected Swan River, West Australia.

Cercartetus neillii (Gould)

TYPE.—B.M. 60.1.5.27, adult ♂, collected at King George's Sound, West Australia.

The type is a skull. Skin not found.

Cercartetus lepidus (Thomas)

TYPE.—B.M. 52.1.15.11, adult ♀, collected by R. B. Gunn in Tasmania.

The type is in alcohol; skull extracted and cleaned.

Eudromicia caudata (Milne-Edwards)

TYPE.—Paris, 1877 (1484 bis), 159, 191 Bl, adult ♀, collected by Laglaize at Arfak Mountains, Dutch New Guinea.

The type is a mounted skin. It alone served for the original description. The trunk with skull attached was discovered in alcohol, and the skull cleaned and studied, 1937.

Dromicia nana (Desmarest)

TYPE.—Paris, 160, No. 192, juvenal ♂, collected by Perron and Lesueur at Marie Island, Tasmania.

The type is a mounted skin; the skull extracted and cleaned, 1937.

Wyulda squamicaudata Alexander

TYPE.—B.M. 21.6.7.1, young adult ♀ (skull only), received from Perth Museum. Collected at Violet Valley Station, Wyndham, East Kimberley, West Australia.

The skin of this specimen stated to be in Perth Museum.

Phalanger maculatus nudicaudatus (Gould)

TYPE.—B.M. 51.1.11.17, juvenal ♀, collected on the voyage of the "Rattlesnake" at Cape York and presented by Macgillivray.

The type is a skin in juvenal coloring, the skull cleaned.

Phalanger chrysorrhos (Temminck)

CO-TYPES.—Leiden: skin "l" (No. 12) with skull "n," adult ♀; skin "m" (No. 13) with skull inside, adult ♀.

The letters are those of Jentink's Catalogue. Both co-types from Amboina.

Phalanger cavifrons (Temminck)

TYPE.—Leiden, Jentink's Catalogue m3, from "Moluccas."

The type is a skull, now without skin, a juvenal specimen of unascertained sex. The mandible associated with the skull does not belong to it.

Phalanger gymnotis Peters and Doria

TYPE.—Genoa, C.E. 1545 (skin) with C.E. 3966 (skeleton), collected by Beccari in 1873 on Aru Island.

Phalanger leucippus Thomas

CO-TYPES.—Genoa, C.E. 10454, adult ♂; B.M. 97.8.7.88, old adult ♂.

Both are skins with skulls extracted and cleaned, collected by Loria in 1894, in "parte montuosa del Vanapa," Vanapa River, Papua.

Phalanger carmelitae Thomas

CO-TYPES.—Genoa, C.E. 10455, old adult ♀; 10456, adult ♂; 10457, young adult ♀; B.M. 97.8.7.87, old adult ♂.

All co-types are skins with skulls cleaned, collected by Loria in 1894 at Upper Vanapa River, Papua.

Phalanger ursinus (Temminck)

Co-types.—Leiden: specimen "a" of Jentink's Catalogue, adult ♂; specimen "b" of Jentink's Catalogue, young adult; specimen "c" of Jentink's Catalogue, juvenal; B.M. 44.3.2.2, young adult ♀ (with skull, 44.4.10.3).

All are mounted skins with skulls extracted and cleaned, collected by Müller and Macklot at Celebes.

Phalanger vestitus (Milne-Edwards)

Type.—Paris, 1877 (1477) 289, 204A, juvenal ♂, collected by Laglaize at Karons, New Guinea.

The type is a mounted skin with skull cleaned.

Pseudochirus canescens Waterhouse

Type.—Paris, 277, 191A, adult ♀, mounted skin, with skull A2572 from Astrolabe Bay, New Guinea.

The stand bears the notation "*Ps. canescens* Waterhouse Type . . . O.T."

A cast of skull in British Museum.

Pseudochirus bernsteini Schlegel

Co-types.—Leiden: specimen "a" of Jentink's Catalogue, adult ♀, skin with skull; specimen "b" of Jentink's Catalogue, juvenal ♂, skin with skull.

Both taken by Bernstein in 1866 at Salawatti, Dutch New Guinea.

Pseudochirus larvatus Forster and Rothschild

Type.—B.M. 11.10.13.2, young adult ♂, collected November, 1910, in Rawlinson Mountains, Mandated Territory of New Guinea.

Note: B.M. 28.10.1.22, not catalogued until 1928, may be a co-type.

Pseudochirus corinnae Thomas

Co-types.—Genoa: C.E. 10458 (skin) with C.E. 17630 (skull), adult, probably ♀; C.E. 10459, skin with partly cleaned skull, adult ♂. B.M. 97.8.7.86, adult ♂, skin and skull.

All collected by Loria in 1894 at Upper Vanapa River, Papua.

Pseudochirus albertisii Peters

Co-types.—Berlin, 5742, adult ♂ (skin and skull) from Arfak, Dutch New Guinea, received from Doria (at Genoa); Genoa: C.E. 1547 (skull) with C.E. 1546 (skin), adult ♂, collected by Beccari at Hatam (Profis), Arfak Mountains, Dutch New Guinea; C.E. 1548 (skin) with C.E. 1549 (skull), ♀, collected by Bruijn, May 1, 1875, at Arfak.

Macropodidae

Dendrolagus ursinus Müller

Co-types.—Leiden: skin "a" with skull "c" (Jentink's Catalogue), young adult ♀; skin "b" with skeleton "a" (Jentink's Catalogue), sex ?; skull "d," lacking a skin (Jentink's Catalogue).

The series was collected by Müller and Macklot at Lobo Bay, south coast of Vogelkop, Dutch New Guinea, in July and August, 1828.

Dendrolagus inustus Müller

Type.—Leiden, specimen "d" of Jentink's Catalogue, juvenal ♀, collected by Müller and Macklot, at Triton Bay (Lobo Bay), south coast of Vogelkop, Dutch New Guinea, August, 1828.

The type is a mounted skin with skeleton.

Dorcopsis mülleri Schlegel

Co-types.—Leiden: specimen "a" of Jentink's Catalogue, with skull "c," young adult ♂; specimen "b" of Jentink's Catalogue, with skeleton "a," adult ♀; specimen "r" of Jentink's Catalogue, skin.

These specimens alone of the series catalogued by Jentink were in the Leiden Museum when Schlegel described *mülleri*. All three were collected in 1828 by Müller. Specimen "b" was figured (1839, Ver. Nat. Ges. Nederl., Pls. 21, 23, 24) and is best selected as lectoholotype.[1]

[1] I am indebted to Dr. Brongersma for the facts stated above.

Dorcopsis brunii (Schreber)

TYPE.—The "Filander" in Bruijn, "Reizen over Moskovie. . ." 1714, Pl. 213.

Didelphis brunii Schreber (1778) is readily distinguishable from the slender muzzle and the facial stripe as a member of the genus *Dorcopsis* (not *Macropus*).

The type locality is unknown. Aru is unavailable as *Dorcopsis* is supposed to be absent from the Islands.

Dorcopsis brunii Müller may not equal *Dorcopsis brunii* (Schreber).

Dorcopsis lorentzii Jentink

CO-TYPES.—Leiden Museum: No. 125, adult ♂; No. 126, adult ♀; No. 127, young adult ♂; No. 47, skin and body in alcohol.

All co-types collected at Van Weel's Camp and Alkmaar, Dutch New Guinea, 300 meters, by Lorentz, August 13–15, 1907.

Dorcopsis luctuosus d'Albertis

TYPE.—B.M. 75.4.16.1, young adult ♀, collected H.M.S. "Basilisk" in the "southern extremity of New Guinea," and sold to d'Albertis.

The type is a skin with skull.

Macropus agilis papuanus Peters and Doria

TYPE.—Genoa Museum: C.E. 1580, skin with skull; C.E. 1581, a juvenal ♀, collected by d'Albertis near Yule Island.

The type skin is a mounted specimen.

Macropus brownii Ramsay

CO-TYPES.—Sydney (Macleay Museum): No. 1033, adult ♂; No. 1034, adult ♀.

Both specimens are mounted skins with skulls inside. Both collected by Rev. George Brown in "New Ireland."

Macropus jukesii Miklouho-Maclay

TYPE.—Sydney (Macleay Museum), skull of type; also skin (♀) which may belong to it.

Macropus gracilis Miklouho-Maclay

TYPE.—Sydney (Macleay Museum).

A mounted specimen with skull still inside.

Thylogale billiardii (Desmarest)

TYPE.—Paris Museum, 76 (No. 51), juvenal, collected by La Billiardière in Tasmania.

The type is a mounted skin with the skull still inside.

Thylogale thetidis (Cuvier)

TYPE.—Paris Museum, 59 (No. 40A), adult ♂, brought alive on board the "Thetis" from Australia in 1826; died in the menagerie, 1833.

The type is a mounted skin. Skull not inside, not found.

Macropus coxenii (Gray)

CO-TYPES.—B.M. 66.4.23.1 (1854A), skin and skull, adult ♂; B.M. 66.4.23.2, skin and skull, juvenal ♀.

Both co-types collected by Coxen at Port Albany, Cape York Peninsula.

Potorous peron (Quoy and Gaimard)

TYPE.—Paris Museum, A2650, young adult, sex not ascertained, collected during the voyage of "l'Uranie" in New South Wales.

The type skull has been sectioned, no skin found. Is this the skull of skin marked *Bettongia gaimardi*?

Lagostrophus fasciatus albipilis (Gould)

CO-TYPES.—B.M. 44.9.30.1, skin, juvenal ♀, with skull; B.M. 46.4.25.13, from York, West Australia; B.M. 44.9.30.2, skin, juvenal ♂, with skull; B.M. 46.4.25.14, from Wongan Hills, West Australia.

All specimens collected by Priess.

Bettongia gaimardi (Desmarest)

TYPE.—Paris Museum, 79, ♂, collected by Gaimard, December, 1820, at Port Jackson, Australia.

The type is a mounted skin; the skull and part of skeleton reported to be in the Anatomy collection. This specimen served also as type for *B. whitei* Quoy and Gaimard.

Muridae

Genera dealt with: *Hyomys, Uromys, Rattus, Eropeplus, Apodemus, Pogonomys.*

Hyomys goliath (Milne-Edwards)

TYPE.—Paris, 1900, 397, 1066A, a young adult ♀, skin and skull, collected by Manton in British New Guinea.

It seems probable that *goliath* and *meeki* are synonymous.

Uromys barbatus (Milne-Edwards)

TYPE.—Paris, 1900, No. 398, 1066B, adult ♂, collected by Manton in British New Guinea. A skin with skull (the mandible missing).

Barbatus, described by its author as *Mus*, is a homonym of the African *Mus barbatus*. It needs no new name, being equal probably to *U. prolixus* or *ductor*, both of which have lately been placed in synonymy by Rümmler.

Rattus erythronotus (Temminck)

TYPE.—Leiden, specimen "a" of Jentink's Catalogue, apparently ♂, Japan.

A mounted skin. Skull extracted 1937. Member of *R. rattus* group.

Rattus tanezumi (Temminck)

CO-TYPES.—Leiden: specimens "a" and "b" of Jentink's Catalogue; specimen "b" used in figure in "Fauna Japonica," collected by Siebold, may be held lectotype; specimen "a" was collected by Bürger.

Tanezumi must be placed in synonymy. Both are juvenals (m3/3 only partly erupted) of *Rattus erythronotus*.

Rattus maorium (Hutton)

TYPE SERIES (?).—B.M. 49.12.8.3 (skull), collected by Sir G. Grey; B.M. 49.11.7.9 (skin); B.M. 51.7.18.51 (skin).

ADDITIONAL MATERIAL.—B.M. 92.9.3.1 (skin), and B.M. 92.9.3.2 (skin) from Chatham Island; B.M. 92.9.3.3 (skull), and B.M. 92.9.3.4 (skull), "from old bone bed with *Aphanipteryx* and other extinct birds"; B.M. 9.8.10.1 (skull).

At Tring Museum: ♂ and ♀, skins with skulls inside, from Mangare, Chatham Island, 1891; adult ♂ with skull inside presented by Sir W. Buller, November, 1892.

The species is alleged to be in existence still on some of the small islands off the New Zealand coast.

Rattus ruber (Jentink)

TYPE.—Leiden, specimen "a" of Jentink's Catalogue. A young adult ♀ *Rattus*, skin mounted, skull cleaned 1937, collected by Rosenberg at Doreh, Western Dutch New Guinea, January, 1869.

Related to *R. praetor*. Pelage now discolored to reddish brown.

Rattus manicatus (Gould)

TYPE.—B.M. 58.11.24.7, young ♀, skin and skull from Gould collection, taken at Port Essington, North Australia.

Manicatus is a representative of *R. assimilis* of the eastern side of Australia.

Rattus huegeli (Thomas)

TYPE.—B.M. 79.4.8.5, juvenal, with m3/3 not fully erupted; sex ?, skin with skull, collected by A. von Heugel at Ovalau (Waitov), Fiji, October, 1878.

This animal, commonly considered a member of the *R. concolor* group, is in reality a juvenal specimen of the Eastern Australian *R. assimilis* (subspecies not ascertained).

Rattus greyi ravus Brazenor

TYPE.—B.M. 19.11.5.103, from Korinchi, Sumatra.

This is a homonym of *Rattus ravus* (Robinson and Kloss, 1916).

The name *brazenori* is here proposed to replace *ravus* Brazenor.

Rattus coninga (Swinhoe)

MATERIAL.—B.M. 64.2.11.3, ♂; B.M. 70.2.10.61 "a to e," skins with skulls.

This species is a member of the *R. rajah-surifer* group. The specimen catalogued in 1864 should represent the type rather than those listed in 1870.

Eropeplus callitrichus (Jentink)

Jentink described *Mus callitrichus* from specimens "a" to "l," all from Menado, Northeast Celebes. All were mounted specimens. Their skulls were extracted and cleaned in 1937. In addition there is a skull from Pare-pare, South Celebes also marked specimen "e" (figured in the "Ergebnisse"). Of that series, specimens

"a," "b," "c," "e," "f," "h," "j" and "k" are referable to *Eropeplus* Miller; specimens "d," "g," "i" and "l" to *Rattus*. The specimen from Pare-pare is a *Lenomys*.

Eropeplus skulls "a" to "e" had been cleaned years before my arrival at Leiden. Jentink's published measurements of the toothrow agree closely with specimen "a" and with that one only. We may consider specimen "a" lectotype for the species *Mus callitrichus* Jentink.

Apodemus argenteus (Temminck)

TYPE.—Leiden, specimen "a" of Jentink's Catalogue, collected by Bürger in Japan, a mounted skin, skull extracted and cleaned 1937.

Temminck's *Mus argenteus* is clearly an *Apodemus*.

Specimens "b" and "c," juvenals, listed by Jentink, not seen.

Apodemus speciosus (Temminck)

CO-TYPES.—Leiden, specimens "a" and "b" of Jentink's Catalogue, collected by Bürger in Japan. Both mounted specimens, with skulls cleaned 1937.

Mus speciosus is referable to *Apodemus*.

Pogonomys macrourus Milne-Edwards

Described from skin only (Paris, 1877, No. 1473, 1104), sex indeterminable, collected by Laglaize, Arfak Mountains, Dutch New Guinea.

Skull, now discovered and cleaned (1937), formerly in alcohol with trunk. As Rümmler, 1938, surmised, *macrourus* is allied to *lepidus*. My race *derimapa* probably becomes a synonym of *macrourus*.

CHIROPTERA

Pteropodidae

Genera[1] dealt with: *Dobsonia, Pteropus, Cynopterus, Pteralopex, Emballonura, Taphozous, Hipposideros, Rhinolophus, Harpiocephalus, Kerivoula, Myotis, Pipistrellus, Tylonycteris, Miniopterus, Murina, Nyctinomus, Pterygistes, Cheiromeles.*

[1] In this order I have not considered generic synonymy.

Dobsonia pannietensis De Vis

CO-TYPES.—Brisbane, 1964–1967, in alcohol, skull of 1966 cleaned.

Specimens collected at Pannet Island, Louisiades group. All four are females.

Pteropus rayneri Gray

CO-TYPES.—B.M. 55.11.7.7, adult ♀, collected by Macgillivray, voyage of the "Herald"; B.M. 56.7.7.4, adult ♀, collected by F. M. Rayner, December, 1854, at Guadalcanar, Solomon Island.

The types are skins with skulls cleaned.

Pteropus woodfordi Thomas

TYPE.—B.M. 88.1.5.5, adult ♂, collected by Woodford at Aola, Guadalcanar, Solomon Islands.

The type is in alcohol, the skull extracted and cleaned, although in poor condition. Three paratypes 88.1.5.6–8 (♂, 2 ♀) are in alcohol, skulls inside.

Cynopterus titthaecheilus (Temminck)

CO-TYPES.—Leiden: specimens "o," "p," "q" of Jentink's Catalogue, collected by Kuhl and van Hasselt at Buitensorg (examined by present author). Leiden: specimens "h," "i," "k," "d," "f," "g" (not examined). All are mounted specimens with skull and skeletons.

Pteralopex atrata Thomas

TYPE.—B.M. 88.1.5.9, adult ♂, collected. by Woodford at Aola, Guadalcanar, Solomon Islands.

The type is in alcohol with skull cleaned. A paratype, B.M. 88.1.5.10, ♂, in alcohol.

Emballonuridae

Emballonura monticola Temminck

CO-TYPES.—Leiden: specimen "a" of Jentink's Catalogue, collected by Kuhl and van Hasselt at Mt. Munara, Java. A mounted skin with the skull cleaned, 1937; specimen "b," mounted skin with skull yet inside, collected by de Boie.

Taphozous fumosus De Vis

CO-TYPES.—Brisbane Museum, five specimens, Nos. 1949–1953, in alcohol (4 ♀, 1 ♂).

The skull of one specimen has been taken out and cleaned.

Taphozous kampenii Jentink

TYPE.—Leiden, specimen "a" (No. 1563), adult ♂, collected by van Kampen, December, 1906, at Batavia. The body is in alcohol. The skull was extracted and cleaned in 1937.

Taphozous malanopogon Temminck

CO-TYPES.—Leiden: specimen "a," adult ♀; specimen "b," adult ♂; specimen "c," adult ♀; collected by Kuhl and van Hasselt at Bantam, Java.

The co-types are mounted skins, with their skulls extracted and cleaned.

Taphozous saccolaimus Temminck

CO-TYPES.—Leiden: specimens "a" to "e" are mounted skins with skulls inside, except "d" whose skull was cleaned, 1937; specimens "f" to "h" are skulls only (skull "h" figured by Temminck, plate 60).

Two species are here represented. Specimens "a" (♂), "b," "c" and "h" represent a larger species. Specimens "d" and "e" represent another, much smaller species (Temminck held them to be young).

The name *saccolaimus* should be restricted to the larger of the two.

Taphozous australis Gould

CO-TYPES.—B.M. 55.11.7.10–11, both adult, sex unknown, collected by Macgillivray on voyage of the "Rattlesnake," October 26, 1848, in caves at Albany Island, Cape York, Australia.

The skulls have been extracted and cleaned.

Rhinolophidae

Hipposideros bicolor (Temminck)

CO-TYPES.—Leiden: ten ♀ and four ♂, mounted. Specimen "d" of Jentink's Catalogue bears earliest date of collecting; its skull extracted 1937. It was secured by Kuhl and van Hasselt in Java (Kuhl died in September, 1821; van Hasselt, September, 1823).

Specimens "a" and "b" were from Amboina. This disagrees with Jentink (p. 168).

Rhinolophus euryotis Temminck

CO-TYPES.—Leiden specimens "a" to "c" of Jentink's Catalogue. Specimens "a" and "b" are ♂ and ♀, mounted skins with skulls inside; specimen "c" is a mounted ♀ skin, skull extracted. The skull of specimen "a," old adult ♂, was extracted in 1937.

Collected by Müller and Macklot in Amboina.

Rhinolophus pusillus Temminck

CO-TYPES.—Leiden: skin "a," with skull "b," both of Jentink's Catalogue, collected by de Boie and Müller in Java; skins "b" to "d" have same data; skull "a" from Java, lacks a skin, collector unknown.

Vespertilionidae

Harpiocephalus harpia (Temminck)

CO-TYPES.—Leiden, specimens "a" and "b" from Mt. Gédé, Java (sex unascertained).

The co-types are mounted skins, the skull of specimen "a" extracted and cleaned, that of "b" still inside the skin. The latter collected by S. Müller.

Kerivoula papillosa (Temminck)

CO-TYPES.—Leiden: specimen "a," ♀, collected by de Boie in Bantam, Java; specimen "b," ♂, from Sumatra. The skull of "a" has been cleaned.

The co-types are mounted skins.

Papillosa should be restricted to the specimen from Java.

Myotis hasseltii (Temminck)

CO-TYPES.—Leiden: specimen "a" of Jentink's Catalogue, young adult ♀, collected by van Hasselt at Bantam, Java; specimen "e" (sex ?), similarly collected. The skull of "a" alone has been cleaned.

The co-types are mounted skins.

Myotis macellus (Temminck)

CO-TYPES.—Leiden: specimen "a" (mounted skin), with skull "g"; specimen

"b," mounted skin, no skull inside; collected by Müller and Korthals, 1836, in Borneo.

Myotis horsfieldii (Temminck)

Co-types.—Leiden, specimens "c," "d," "e," "f," collected by Kuhl and van Hasselt at Mt. Gédé, Java.

The co-types are mounted skins with skulls inside, except specimen "c," whose skull is lettered "i."

Myotis tralatitius (Horsfield)

The specimens, "e" to "h," marked by Jentink (p. 190) as "types" of Temminck's species, which is apparently a homonym of *tralatitius* Horsfield. Unfortunately I was unable to find any type of this last at the British Museum.

Pipistrellus circumdatus (Temminck)

Co-types.—Leiden: specimen "a," ♀; specimen skull "a," without skin. The female is a mounted skin. Its skull was taken out and cleaned in 1937. Collected by de Boie and Macklot at Tapos, Java.

Pipistrellus (?) tenuis (Horsfield)

At Leiden, specimens "a" and "b" are marked "types" of "*tenuis* Temminck." The skulls of both were cleaned in 1937. Both were collected by S. Müller in Sumatra.

In the British Museum, specimens 7.1.1.407–408, with forearms 26 and 27 mm., are also marked "co-types" of "*tenuis* Temminck." *Tenuis* Temminck is a homonym of *tenuis* Horsfield (1824); of the latter I found no type specimen.

Pipistrellus akokomuli (Temminck)

Co-types.—Leiden: specimen "b," mounted skin, with skull "b"-"c" cleaned, specimens "o," "p," "q," "r," entire in alcohol. All collected by Siebold at Nagasaki, Japan.

Pipistrellis (?) macrotis (Temminck)

Co-types.—Leiden: specimens "n" and "o" (♂), mounted skins with skulls inside; specimens "m," "n," "o," skulls only. [Thus skulls "n" and "o" duplicate those yet in the skins.]

Collected by Müller at Padang, Sumatra.

Tylonycteris pachypus (Temminck)

Co-types.—Leiden: specimens "a," "b," "c" (apparently ♀), mounted skins with skulls inside; skulls without skins, "d," "e," "f," "g," "h"; skeletons "a," "b," "c"; B.M. 44.4.4.24 (specimen "d")—probably by exchange.

All collected by van Hasselt from Bantam, Java. The British Museum specimen, if "d" of Jentink's Catalogue (p. 176), comes from Celebes.

Miniopterus australis Tomes

Co-types.—B.M. 54.5.19.5 (No. 2 of Tomes and lectotype of Thomas), adult ♂, in alcohol, skull cleaned; B.M. 54.5.19.6, ♂, in alcohol, entire; B.M. 54.5.19.7, ♀, in alcohol, entire. Collected by Sir G. Grey at Loyalty Islands.

Miniopterus blepotis (Temminck)

Co-types.—Leiden: specimen "d," mounted skin, skull inside, collected by de Boie in Java; specimen "e," mounted skin, skull cleaned, 1937, collected by Kuhl and van Hasselt in Java; specimens "f" and "g," mounted skins with skulls inside, Java.

Murina suilla (Temminck)

Co-types.—Leiden: specimens "b" and "c," collected by de Boie at Tapos, Java. Both are mounted skins. The skull of "b" is extracted and cleaned.

Molossidae

Nyctinomus tenuis Horsfield

Type.—B.M. 79.11.21.137, adult, from Java.

The type is a skin (possibly from alcohol), with skull extracted 1937.

Jentink's statement (p. 202) that specimens "d," "e" to "i" and "m" are types of *Dysopes tenuis* Thomas may be correct, but they appear to be congeneric with, and therefore homonyms of *tenuis* Horsfield.

Nyctinomus petersi Leche

CO-TYPES.—Leiden: 522, specimen "a," adult ♂, in alcohol, with skull extracted and cleaned in 1937; 522, specimen "b," adult ♀, in alcohol, skull inside. Both collected by Schneider in 1888 at Adelaide, South Australia.

Pterygistes molossus (Temminck)

CO-TYPES.—Leiden: specimen "a," mounted skin without skull; specimens "b" and "c," mounted skins with skulls inside. A complete skeleton marked "a." Two skulls without skins marked "b" and "c." Collected by Bürgers in Japan.

Cheiromeles caudatus Temminck

CO-TYPES.—Leiden: specimen "a" of Jentink's Catalogue, a mounted ♀, with skull "c," collected by Müller in Bantam, Java; specimen "b," mounted ♂, with skull inside, from Borneo; specimen "c," mounted ♀, with skull extracted, from Java; skeleton "a," collected by Müller, from Bantam, Java.